

RESEARCH HORIZONS / Anthony L. Rosner, PhD, LLD (Hon), LLC Variation: Friend or Foe?

There is little doubt variation is the keystone that has brought us forward in development, discovery, intellectual discourse and just plain avoidance of boredom. It is without coincidence that Stephen Jay Gould pointed out, "All evolutionary biologists know that variation itself is nature's only irreducible essence." Indeed, such terminologies as *multicultural* or *diversity* are important foundations of today's progressive society.

However, we know in other venues that variability is a concept to be avoided, such as in terms of units of measure or currency. When it comes to health care practice, variability presents itself as a double-edged sword. It seems as if every time a randomized clinical trial goes down with a negative result, we hear the usual palliative statements that "subgroups weren't analyzed" or "every patient is different and requires a tailor-made intervention."

There is merit in those statements, yet in taking this reasoning to the limit, I'm reminded of a variation of the Ideal Gas Laws that my physical chemistry professor used to share with our advanced class: "Under stringently defined conditions of pressure, temperature and volume, variables behave as they damn well please."

Poor Quality, Outcomes in Medicine

It turns out that, in an analysis of medical practice, poor quality and

outcomes have been linked to five principal reasons which point to variability as the culprit:¹

1. Increasingly Complex Health Care Environment: While in the 1950s, there was a small number of medications to choose from, the Institute for Safe Medication Practices asserts there are now more than 10,000 prescription drugs and biologicals, and more than 300,000 over-the-counter products, available in the United States. Add to that sophisticated intensive-care units, modern imaging techniques, catheterbased procedures, transplant services, minimally invasive techniques and other options. David Eddy, who has in the past reminded us as to how few medical procedures are supported by rigorous science,² has proclaimed, "The complexity of modern American medicine exceeds the capacity of the unaided human mind."

2. Exponentially Increasing Medical Knowledge: The number of published randomized clinical trials grew explosively from 1966 to 10,000 per year in 1995,^{3,10} that number being doubled by 2010. More than 10 years ago (2004), the National Library of Medicine reported it was adding nearly 11,000 new articles *per week* to its online archives, representing just 40 percent of all articles appearing worldwide. And nearly 25 years ago (1991), the Journal of the American Medical Association pointed out that "significant declines in medical knowledge" were evident in general internists and internal medicine subspecialists just 3-4 years after board certification – and that 15 years after the initial board certification, a whopping 68 percent of internists would not pass the American Board of Internal Medicine certification exam.

The estimate was that, to maintain current knowledge, a general internist would have to read 20 articles a day, 365 days a year.⁴ Under these circumstances, maintaining current knowledge from the literature becomes a virtual impossibility for all clinicians.

3. Lack of Valid Clinical Knowledge: Stemming from Eddy's original observation in 1991 that less than 20 percent of medical interventions were supported by scientific studies² and progressing to the more recent report that 47 percent of interventions are of "unknown effectiveness,"⁵ it's obvious much is left to the physician's judgment – which we know now has been admitted to the three-legged pantheon we call evidence-based medicine. This leads directly to the final reason...

4. Subjective Judgment: The effects of this could not have been more obvious in such examples as (a) the huge variations of surgical rates in different regions of the United States;⁶ (b) the striking variability in the percentages of students in public schools given medication for attention deficit disorder in neighboring cities;⁷ (c) variations in the treatment of prostate cancer (radical prostatectomy or external beam radiation) primarily dictated by the specialty of the treating clinician;⁸ and (d) the surreal differences in the presumably objective gold standards of meta-analyses, which was shown in one report to come down to clinical trial scoring criteria that were, in fact, subjective.⁹

The Challenges for Chiropractic

How does this all relate to chiropractic? Simply put, in trying to put one's arms around the nearly 200 techniques that have been recognized¹¹ and coming to grips with the challenge of being able to replicate a given patient's treatment with some degree of uniformity in the event a practitioner should become indisposed during a course of therapy. You could imagine an outsider would blanch at the chiropractic term diversified, thinking that, without the proper detail and documentation, the diversified technique could represent the epitome of variability and be subject to criticism, lacking the proper means of communicating what was done by one practitioner versus another.

CONTINUED ON PAGE 25

6 Recommendations for D.C.s

In my 34-year career, I've seen a lot, including what factors really make a difference in a malpractice lawsuit. Among my recommendations ...



Michele Quattlebaum, J.D

is Power

Knowledge

For D.C.s, there is nothing worse than getting a claims representative on the phone who has no idea what you are talking about or an attorney that you have to educate. You can tell immediately if they don't know anything about chiropractic.

This is a common problem that insurance carriers have with defense lawyers. Many experienced attorneys have previously defended *medical* doctors and could have developed the prejudice that the medical profession has against chiropractic.

NCMIC strives to "weed out" those defense attorneys who do not understand chiropractic and do not believe in the value of the chiropractic profession in healthcare.

> Learn about Michele's other recommendations by going to **www.ncmic.com/Recommends** Or, find out more about NCMIC by calling 800-769-2000, ext. 3124.



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CONTINUED FROM PAGE 20

Indeed, a perfect example of the "failure to communicate," as portrayed so graphically in the movie classic, "Cool Hand Luke," could not have been more evident in the fate of what was believed to be a potentially groundbreaking hypertension study conducted by Bakris and Dickholtz.

Despite its reporting of spectacular attenuations in both systolic and diastolic blood pressure in chiropractic patients managed by the National Upper Cervical Chiropractic Association (NUCCA) atlas technique,12 the fact remains the trial was conducted by only a single practitioner (now deceased), with apparent failures to translate the precise manual techniques employed to other clinicians - culminating in the fact that an attempt to confirm this study at Palmer University in Davenport couldn't even use the NUCCA technique, but was forced to switch to the toggle recoil method instead.

In other words, were we looking at a Zen master of NUCCA without the proper means to propagate this talent for future generations? This chain of events is clearly a casualty of carrying variability too far, such that more heft needs to be devoted to this area and perhaps others in the chiropractic research agenda, in order to adhere to what is truly the cornerstone of robust scientific research. That principle is being able to replicate one's results, better known as *reproducibility*.

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ICD-10 Coding Tips: Lesson #1

CONTINUED FROM PAGE 8

not been established by the end of the encounter, it is appropriate to report codes for sign(s) and/or symptom(s) in lieu of a definitive diagnosis.

Another coding conundrum is the use of signs and symptoms when they are routinely associated with a disease process. These codes should not be assigned as additional codes unless otherwise instructed by the classification.

A good example of this coding challenge is when there is a diagnosis involving disc disorder; there would be no need to code pain, as the pain is inherent to the disc diagnosis. However, additional signs and symptoms that may not be associated routinely with a disease process should be coded when present.

For instance, while a disc condition would be associated with pain, it may or may not include muscle spasm, as muscle spasm is not inherent and therefore should be coded separately, if present, with M62.830, which is the code for spasm of the back.

Coding for Spinal Disorders

The coding of spinal disc disorders also can be a bit confusing because ICD-10 provides many new choices that allow for greater specificity. First, consider when you see the code for disc disorder accompanied by other terms and conditions that may include bulges, herniations, protrusions, degeneration, etc. However, the disc descriptions also offer specificity to disc disorders with myelopathy or radiculopathy. Therefore, if the disc were causing myelopathy, the codes would be M50.00 to M50.03. However, if the disc were causing radiculopathy (neuritis), it would be coded with M50.10 to M50.13.

If the disc were displaced, but did not cause myelopathy or radiculopathy, it would be coded using M50.20 to M50.23. If it were degenerated, but not causing myelopathy or radiculopathy, it would be coded with M50.30 to M50.33. And going a step further, if the disc disorder neither caused

myelopathy or radiculopathy, nor were displaced or degenerated, but it can be "specified," then the "other specified" disc disorder could be used: M50.80 to M50.83. Finally, if disc pathology is present, but with none of the aforementioned specifics, and it could not be specifically identified, the "unspecified" disc disorder codes (M50.90 to M50.93) would be utilized.

As confusing as it may seem at first glance, this is simply a granulated method of description that can range from extremely specific to nonspecific, with separate codes for each derivation. Note spondylosis does much the same, as it has codes for with and without myelopathy or radiculopathy as well.

External Causes of Injury

I would be remiss if I didn't offer a few words about the codes designating external causes of injury. These are the codes that describe the causes of injury,

CONTINUED ON PAGE 26



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Dr. Anthony L. Rosner, a 1972 graduate of Harvard University (PhD in biological chemistry/medical sciences), is the former longtime director of research and education for the Foundation for Chiropractic Education and Research. For additional information including an extended biography, printable version of this article and link to previous articles, visit his columnist page online.

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